

XPLAYER™



Live Stream and File Playback Application User Guide V4.0.0.117

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I. Information about the manual



This user guide is designed to help users to setup, configure and work with the Teracue XPlayer™.

.! Important features are marked by this sign.

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1. XPlayer™ Overview

The XPlayer™ is a stream playing application.

It is a PC desktop software application. It is capable of receiving and displaying MPEG-2 SD/HD and H.264 SD/HD Transport Streams (TS) on Windows based PCs and laptops.

..! The XPlayer™ is available in two different versions.

iCue XPlayer™

Designed and scripted for playback of LIVE and VOD streams that are managed by iCue™ Streaming Media Servers. The feature set of the iCue XPlayer™ is defined by the Streaming Server.

The iCue XPlayer™ opens automatically when LIVE/VOD streams are selected from the iCueTV WEB, iCue ADMIN Web user and Casablanca interfaces.

Standalone XPlayer™

The standalone XPlayer™ is designed as a standalone stream playback application for viewing LIVE streams and video files. The Standalone XPlayer™ is not scripted by a Streaming Server. It has been designed as a software decoder and LIVE viewing and playback application for the Teracue Encoder and also Teracue Gateways. It is compatible to standard ISO MPEG-2 and H.264 Transport Streams.

Applications:

The standalone XPlayer™ opens when launched from the start menu. LIVE streams can be selected from a LIVE stream list (SAP guide) or when designated multicast addresses are entered manually.

2. System requirements

This section outlines the basic software, hardware and network requirements, which are needed to run **XPlayer™** on your system. The following requirements are the minimum and the recommended requirements for using the **XPlayer™**.

2.1 Operating system & software

Windows XP Professional SP3 with DirectX 9c or higher
Windows Vista SP2 or higher
Windows 7 SP1 or higher
Windows 8 and 8.1
Microsoft .Net Framework 3.5 SP2
Microsoft .Net Framework 4.0

Firewall:

A firewall may not block the Standalone XPlayer™ application.

2.2 Hardware

Pentium 4 with 2GHz for viewing one MPEG-2 SD or H.264 SD stream. Per additional simultaneous stream 1GHz is necessary.
Minimum 256 MByte RAM for viewing one stream.
Minimum 512 MByte RAM for simultaneous viewing of two to four streams.

Graphics Card:

DirectX support. Graphic cards with shared memory are not supported.

Free hard disk:

The binary files of the XPlayer™ need min. 20 MB free disk space.

2.3 Network

Ethernet standard: 100 Base-TX (data rate 100 Mbit/s)
Multicast capable network
Support of IGMPv2 or higher

3. XPlayer™ installation

The following section describes the XPlayer™ installation. The XPlayer™ can be installed from the Teracue 'Software CD'. Insert this CD into your laptop or PC and please execute the EXE-file, which you can find in the **4.Software\2.Decoding-STB-Player\XPlayer_PC-Stream-Player** folder of the CD.

It opens the install assistant for the XPlayer™, see Figure 1.

The InstallShield Wizard will guide you step by step through the installation process. Please click on **'Next>'** to continue the XPlayer™ installation.

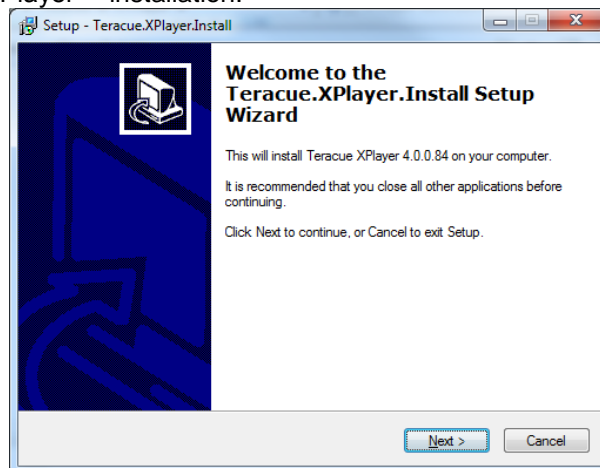


Figure 1: Install Shield Wizard for the XPlayer™

Now will be defined where the XPlayer™ files should be stored, see Figure 2.

In the section **'Destination Location'** please indicate the storage path of the XPlayer™ binary files, which are needed for the XPlayer™. These binary files are elementary components of the XPlayer™. The default value of the storage path is **'C:\Program Files\Teracue\iCue\'**. We do not recommend changing the path.

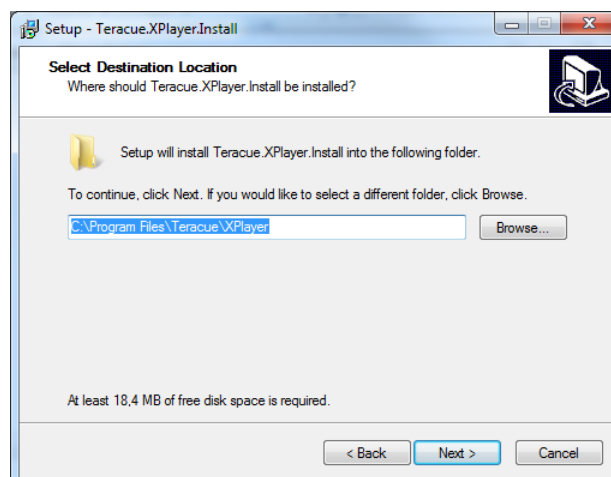


Figure 2: Define the installation path for the XPlayer™ binary files

Click **'Next>'** to continue the XPlayer™ installation or choose **'Browse...'** to define another installation path.

Please choose where the Menu Folder should take Place, see Figure 3.

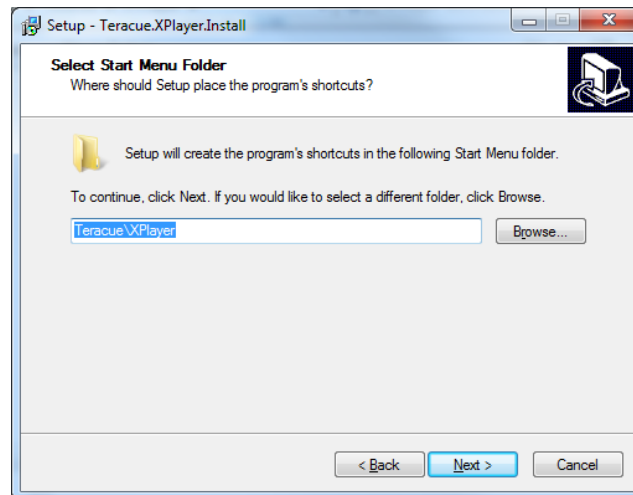


Figure 3: Start Menu Folder for XPlayer™

If needed the installer can make you a desktop Icon see Figure 4.

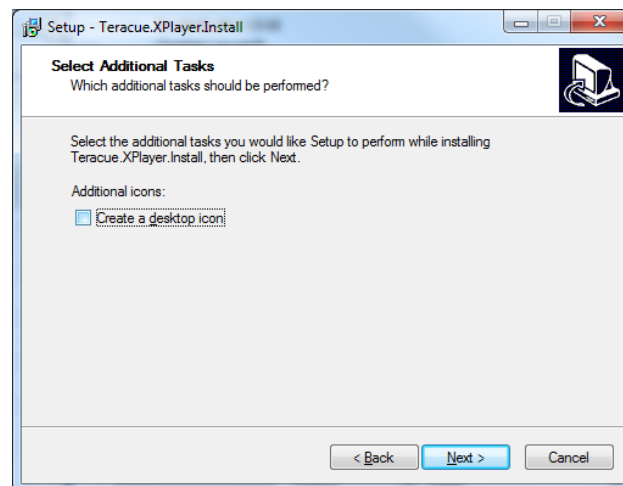


Figure 4: Desktop Icon for XPlayer™

Before the installation takes place an installation summary is listed. Click **'Install'** to begin with the installation, please see Figure 5. The installation progress should take less than one minute.

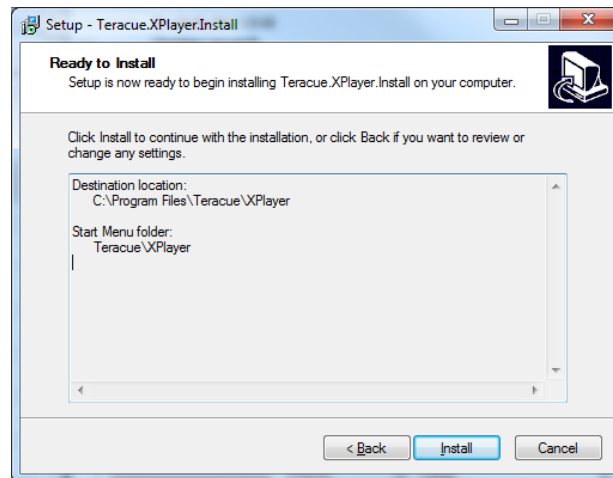


Figure 5: Ready to install the XPlayer™

When the installation is finished, you will see dialog of Figure 6. Click on **'Finish'** to exit the installation program.

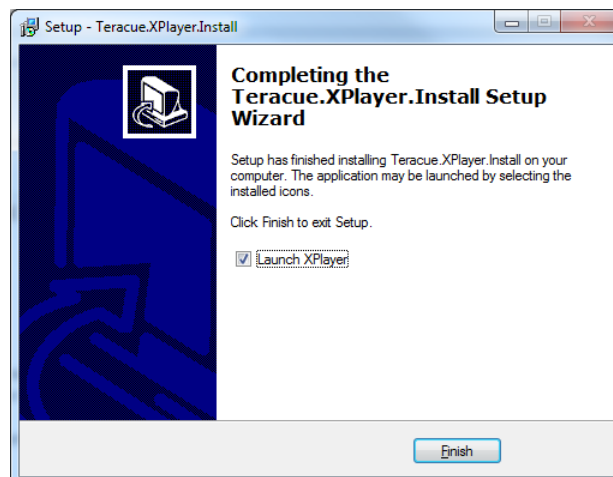


Figure 6: Complete installation of the XPlayer™

- ..! To launch the XPlayer™, please click on your Windows Start button and select:
Start>Programs>Teracue>iCueXPlayer>iCueXPlayer
Or execute the 'iCueXPlayer' short cut on your PC-desktop.

When you have launched the XPlayer™ via short cut or over the Windows start menu, the XPlayer™ application opens on your desktop and you can start viewing streams. See Figure 7

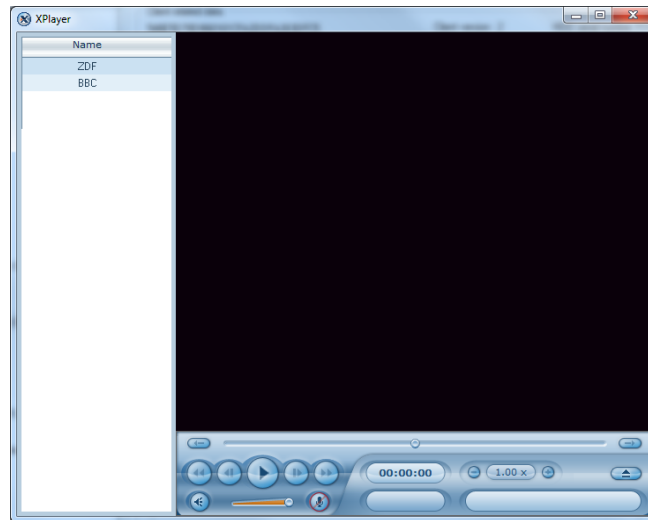


Figure 7: The graphical user interface of the XPlayer™

3.1 IP-address information

- .!. **Selecting a different IP-address is easily possible after the complete installation has been finished. The designated reception IP-address for streaming can be selected under the XPlayer™ options menu.**
- .!. **If your XPlayer™ is not working and you have changed the PCs IP-address please set the correct IP-address in the XPlayer™ options menu.**
- .!. **If you need to change your IP-address frequently (e.g. demo purposes) then it is best to use the IP-address 'Auto' setting in the XPlayer™ options menu.**

? Why does the XPlayer™ need to know the IP-address of the PC?

? Why do I need to select a certain IP-address as the receiver address?

- .!. **To receive streams the XPlayer™ needs to know from which network interface to gain access to the network and the stream.**

Many professional workstations and PCs have more than one network interface or network adapter. Specifying the IP-address tells the XPlayer™ exactly which of the network adapters to use.

- .!. **Normal users with only one network adapter, i.e. only one IP-address, should change the IP-address setting (found in the XPlayer™ options menu) to the 'Auto' setting.**

If 'Auto' is selected and the PC has more than one IP-address/network adapter then the first free adapter will be chosen for the XPlayer's network access and stream receiving.

3.2 Registering XPlayer™

If you have launched the XPlayer™ for the first time, you must register the XPlayer™. To register the XPlayer™, please open the XPlayer™ via the 'iCue XPlayer' shortcut on your desktop. It opens the 'Register Teracue product' window, see Figure 8 .

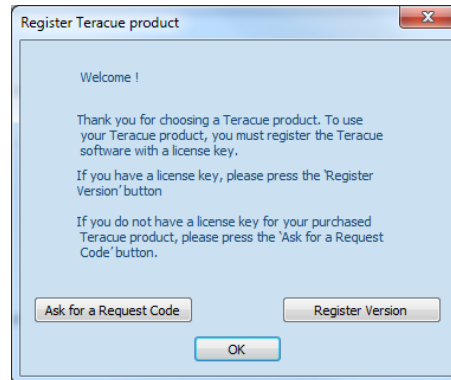


Figure 8: 'Register Teracue product' window

Registering a FULL VERSION:

For registering with a FULL VERSION, click on '**Ask for a Request Code**'. It opens the 'New license request' window, see Figure 9.

Registering a DEMO VERSION:

For registering a limited trial DEMO VERSION, click on '**Register Version**' and enter the demo license key and your name in the 'Registration' window, see Figure 10. You can get the demo license key form the Teracue AG, please contact support@teracue.com.

After you pressed '**Ask for a Request Code**', the 'New license request' window will appear, see Figure 9. It displays your request code, which is needed to obtain a full version license key.

Please right-click on the blue marked request code and copy it.

Paste it into an email along with your name and company details and send it to: support@teracue.com

You will shortly receive an answer supplying you with your full license key.

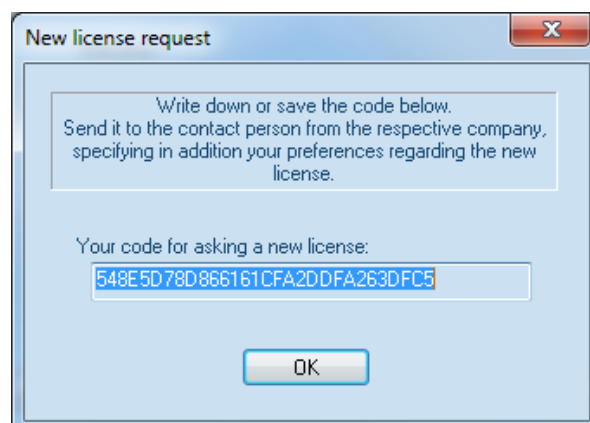


Figure 9: 'New license request' window

After you have received your full license key, you can continue with the registration of your **XPlayer™ Software**. Therefore please open the XPlayer™ again. It opens the 'Register Teracue product' window again. Click in this window the '**Register Version**' button. It opens the 'Registration' window, see Figure 10.

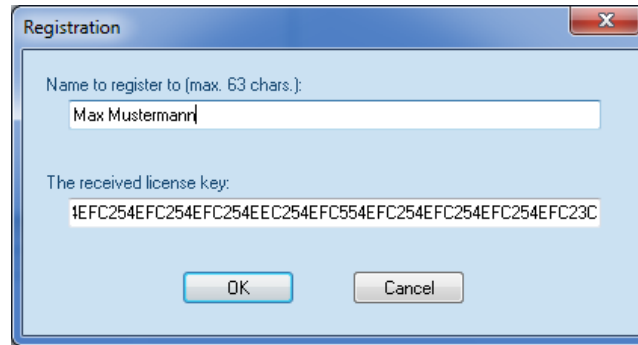


Figure 10: 'Registration' window

Please enter your name in the top entry field. And paste your full license key from the e-mail into the lower field. Simply click 'OK'. Your product is now fully licensed, see Figure 11.

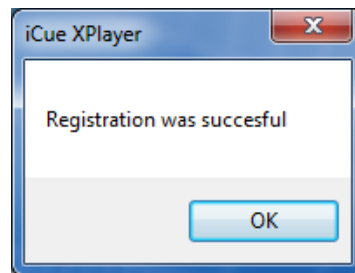


Figure 11: Hint window for the successfully Registration

./! **If you have a demo license, please renew your XPlayer™ licenses before it runs out.**

4. Using the XPlayer™



To launch the XPlayer™, please execute the '**XPlayer**' short cut on your desktop. You can also start the XPlayer™ by clicking on your Windows '**Start**' button and selecting: **Start>Programs>Teracue>XPlayer>XPlayer**

4.1 Graphical user interface of the XPlayer™

When the standalone XPlayer™ is opened, you see the graphical user interface as shown in Figure 12. The graphical user interface is organised in three sections:

- The video window
- The time slider¹ and
- The video control panel

A stream or file for viewing needs to be selected in order for the XPlayer™ to start playing the video stream or file.

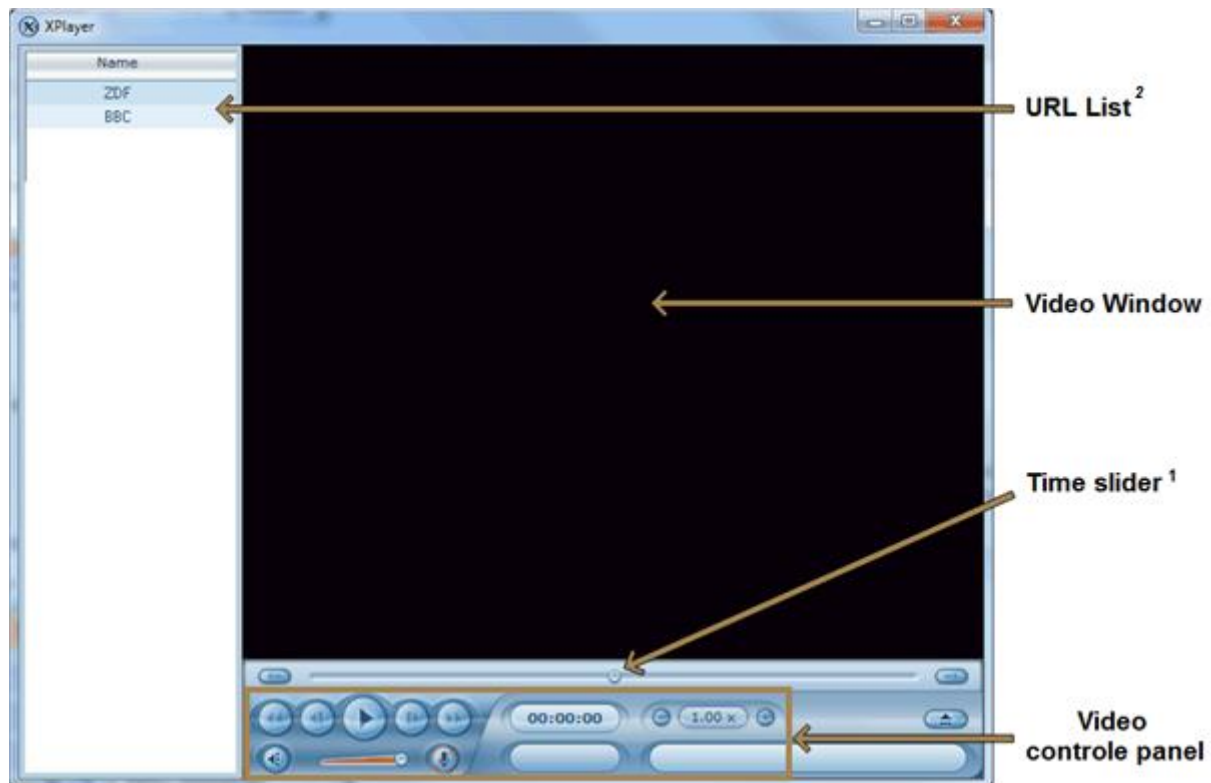


Figure 12: Graphical user interface of the XPlayer™

¹ The time slider is only supported for playing back local files and VOD streams from Teracue iCue™ Streaming Media Servers. Live Streams cannot be FF/REW.

² The URL List have to be enabled in the options with "Show URL List"

4.2 Video control panel

The video control panel contains buttons for the video control, see Figure 13. Table 1 shows the description of the video control panel.



Figure 13: Video control panel of the XPlayer™










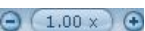



| Icons: | Name: | Description: |
|---|-------------------------|--|
|  | Rewind | Rewinds the video. This option is only available for file and VOD playback. To set the 'Fast Play Step' size for the 'Rewind' button, please see chapter 4.5 on page 21. |
|  | Frame-by-Frame Backward | Playbacks the video backward in the 'Frame-by-Frame' mode. This option is only available for file playback. |
|  | Play / Pause | Plays/Pauses your video. |
|  | Frame-by-Frame Forward | Playbacks the video forward in the 'Frame-by-Frame' mode. This option is only available for the file playback. |
|  | Fast Forward | Fast-Forwards the video. This option is only available for file and VOD playback. To set the 'Fast Play Step' size for the 'Fast Forward' button, please see chapter 4.5 on page 21. |
|  | Mute | Mutes/Unmutes the audio. |
|  | Microphone | Enable or Disable your Microphone to use the Talkback function with ENC-200 or ENC-300 |
|  | Volume Control | Controls the sound level of the audio. |
|  | Time Display | Displays the time. To set the time display option, see also chapter 4.5 on page 21. |
|  | Playback Speed | <p>Playbacks the video in a defined speed. The '+' button playbacks the video faster and the '-' button playbacks the video slower. You have following options:</p> <ul style="list-style-type: none"> ▪ 0.25 times slower than the normal speed ▪ 0.5 times slower than the normal speed ▪ 0.75 times slower than the normal speed ▪ 1.0 indicates the normal speed ▪ 1.25 times faster than the normal speed ▪ 1.5 times faster than the normal speed ▪ 1.75 times faster than the normal speed ▪ 2.0 times faster than the normal speed |
|  | Video Select | Opens the 'Video Select' window. See also chapter 4.3 on page 16. |
|  | Jump Backward | Jumps backward in a defined time steps. To define the 'Jump time' steps, see also chapter 4.5 on page 21. |
|  | Jump Forward | Jumps forward in a defined time steps. To define the 'Jump time' steps, see also chapter 4.5 on page 21. |

Table 1: Description of the video control panel

4.3 Stream playback



To open the 'Video Select' window for playback of streams or files, you must click on the 'Video select' button which you find on the control panel of the XPlayer™, see Figure 14.

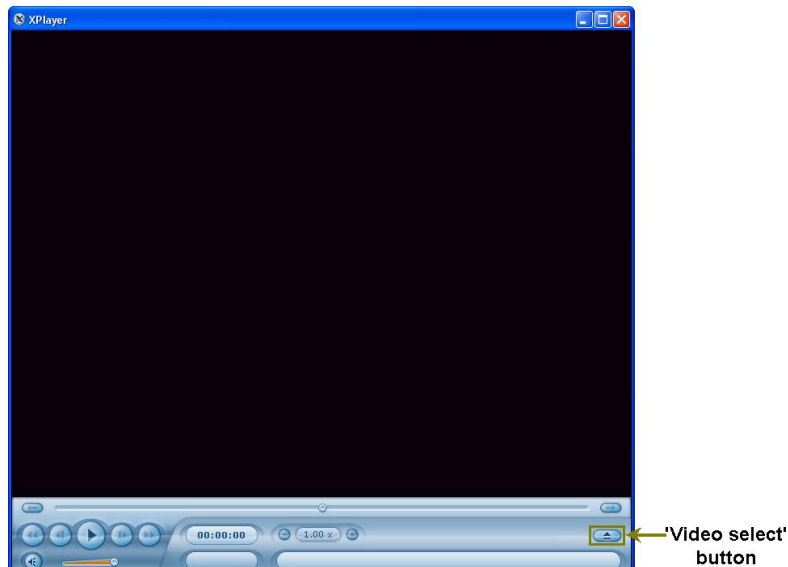


Figure 14: 'Video select' button on the control panel of the XPlayer™

The XPlayer™ playbacks UDP/IP Transport Streams and can process also the video codec's:

- MPEG-2 SD
- MPEG-2 HD
- MPEG-4 pt. 10 / H.264 SD
- MPEG-4 pt. 10 / H.264 HD

Figure 15 shows the 'Video select window and Table 2 describes the 'Video select' window. The 'Video Select' window provides following tabs, which are described in the subchapters:

- 'Live Streams' tab
- 'Files' tab
- 'URL' tab
- 'URL List' tab

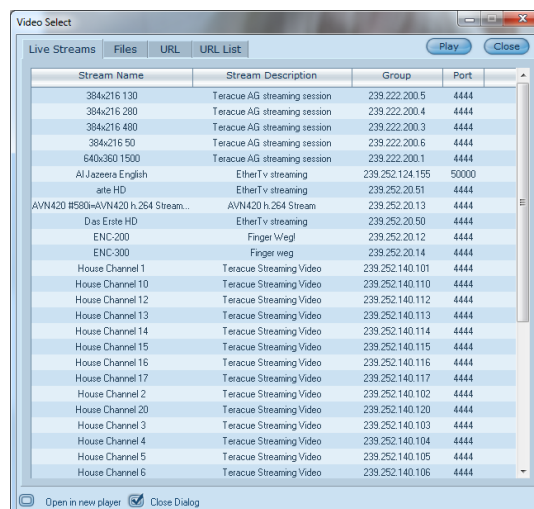


Figure 15: The 'Video Select' window of the XPlayer™

| Buttons, Text- / Check-Boxes: | Description: |
|-------------------------------|---|
| Play: | Plays the selected stream, VOD or file. |
| Cancel: | Closes the 'Video select' window. |
| Open in new player: | Opens the selected video in a new XPlayer™. |
| Close Dialog: | Closes the 'Video Select' window after a video is selected by pressing the 'Play' button or double-clicking on the desired video. |

Table 2: Description of the 'Video Select' window

4.3.1 'Live Streams' tab

Please select the 'Live Streams' tab of the 'Video select' window, to watch a Live-Stream on the XPlayer™. See Figure 16. If your streaming source sends SAP messages (Session Announcement Protocol) into the network, the XPlayer™ receives these SAP messages. And in the 'Live Streams' tab the SAP messages of all streams will be listed which are available in the network. Your streaming source must always send the SAP messages to the multicast address 224.2.127.254 and to the port number 9875.



Figure 16: 'Live Streams' tab of the 'Video Select' window

4.3.2 'Files' tab

Select the 'Files' tab, if you want to watch a video file with the XPlayer™. Click on the 'Browse' button, browse to your desired video file and afterwards click on the 'Play' button. See Figure 17. Video files which you have played on the XPlayer™, will be listed in the section below.



Figure 17: 'Files' tab of the 'Video Select' window

4.3.3 'URL' tab

If your streaming source does not stream SAP messages into the network, you are also able to enter the IP-address of your desired stream in the 'URL' tab, see Figure 18. Type the following syntax into the text field:

icue://stream_IP-address:Port-number

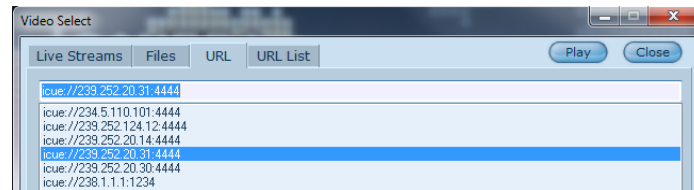


Figure 18: 'URL' tab of the 'Video Select' window

Receiving a multicast stream:

If you want to receive a multicast stream, type in the part of 'stream_IP-address' your desired multicast IP-address.

For example: icue://239.252.20.100:4444

Receiving a unicast stream:

If you want to receive a unicast stream, the 'stream_IP-address' is the IP-address of your system. So for receiving a unicast stream, please type in the part of 'stream_IP-address' the IP-address of your system.

For example: icue://172.16.116.1:4321

Receiving a tcp stream:

If you want to receive a live stream from a TCP server use the following syntax:

tcp://SERVER_IP:PORT

For example: tcp://192.168.0.23:8888

Receiving a http stream:

If you want to receive a live stream from a HTTP server use the following syntax:

http://SERVER_IP[:PORT]/RESOURCE_NAME

For example: http://stream.antenne1.de/stream1/livestream.mp3

Receiving an rtsp stream:

If you want to receive a stream from an RTSP server use the following syntax:

rtsp://SERVER_IP:PORT/RESOURCE_NAME

For example: rtsp://192.168.0.229/axis-media/media.3gp

Receiving an rtsp stream from redundant servers:

If you want to receive a live stream from multiple RTSP servers use the following syntax:

icue://rtsp://SERVER_IP1:PORT1/RESOURCE1&rtsp://SERVER_IP2:PORT2/RESOURCE2

The streams are played in random order from SERVER1 or SERVER2.

For Example: icue://rtsp://192.168.0.23:555/239.1.1.3:1234&rtsp://192.168.0.24:555/239.1.1.3:1234

Receiving an rtp stream:

If you want to receive a live RTP stream use the following syntax:

rtp://STREAM_IP:STREAM_PORT

for example: rtp://239.1.1.1:1234

4.3.4 'URL List' tab

This option is to configure the favourites Multi or Unicast Channels for fast access. Please configure all your favourites Channels. See Figure 19.

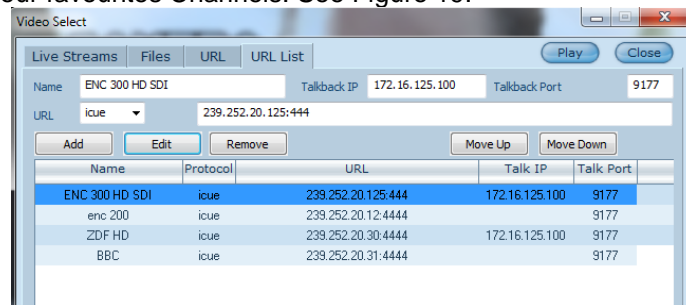


Figure 19: 'URL' tab of the 'Video Select' window

For Multicast or Unicast please choose URL drop down Menu **icue** and enter in the next field the **stream_IP-address:Port-number**

For example: 239.252.20.100:4444

The Talkback IP and Port is only needed when you have an Encoder witch is able for Talkback like Teracue ENC-200 or ENC-300. The full Talkback functionality is described in Chapter 4.6

After you have finished you are able to choose your favourites on the Left Side in the URL List.

If you do not have the URL List in the GUI see Figure 9 please enables the URL List in the XPlayer™.Options described in Chapter 4.5

The configured Channels are saved in the Registry: HKLM\Software\Teracue\iCue\iCueXplayer\url_list
With export and import you could easily duplicate the URL List to different Computers

4.4 Full screen and original video size

If you want to watch a video in the full screen mode, please right-click on the video window of the XPlayer™ and select '**FullScreen**'. See Figure 20. To quit the full screen mode, please right-click on the video window and select 'FullScreen' again or press the 'Esc' key on your keyboard.

You can also resize the video window by resizing the XPlayer™ window. But if the video window should show the exact original video window size again, please right-click on the video window and select '**Original Size**'. See Figure 20.

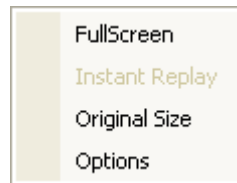


Figure 20: Advanced options; right-click in the video window

4.5 'Player Options' menu of the XPlayer™

In the 'Player Options' of the XPlayer™ you can set the player configuration. To open the 'Player Options' of the XPlayer™, please right-click on the video window and select **'Options'**. See Figure 20. It opens the 'Player Options' window, see Figure 21. Table 3 describes the 'Player Options' window.

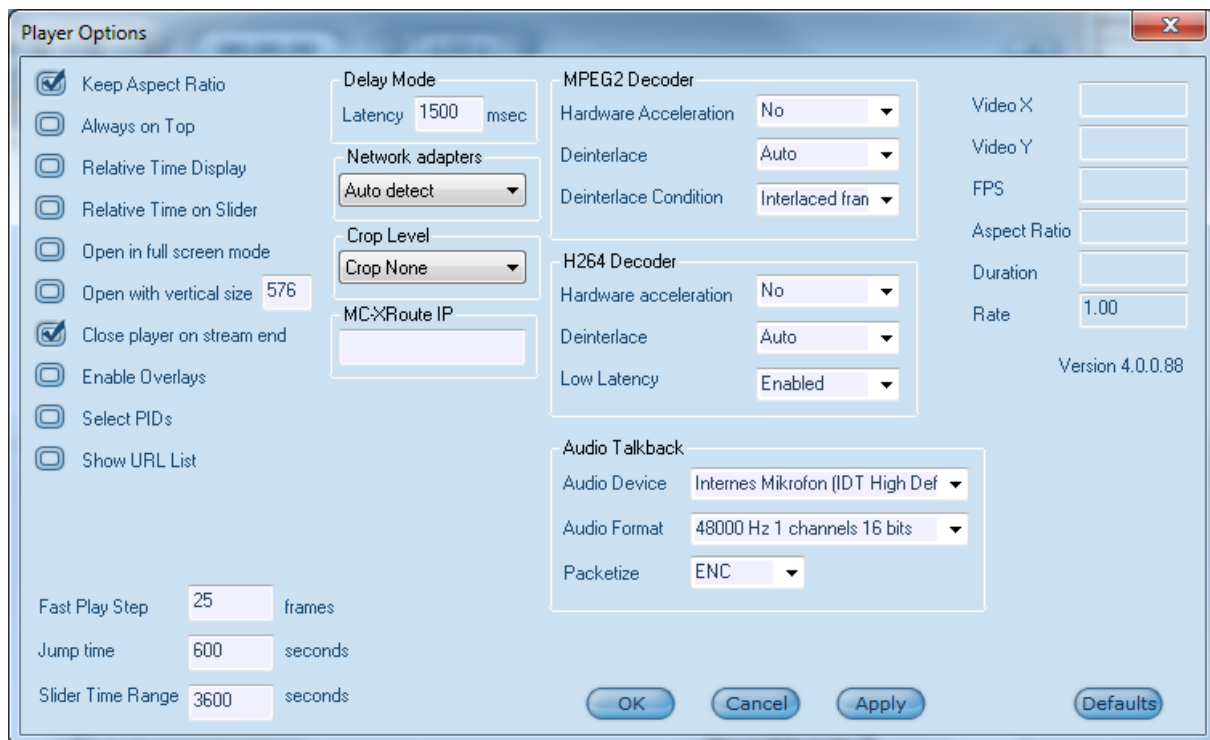




Figure 21: 'Player Options' window of the XPlayer™

| Buttons, Text- / Check-Boxes: | Description: |
|-------------------------------|---|
| Keep Aspect Ratio: | Enables/Disables 'Keep Aspect Ratio' mode. If 'Keep Aspect Ratio' mode is enabled, the video window always keeps video aspect ratio during resizing of the XPlayer™ window. If 'Keep Aspect Ratio' mode is disabled, the video window does not keep video aspect ratio during resizing of the XPlayer™ window. In the case of resizing the XPlayer™ window with disabled 'Keep Aspect Ratio' mode, black strips occur around the video. |
| Always on Top: | Enables/Disables 'Always on Top' mode. If 'Always on Top' mode is enabled, the XPlayer™ window is always placed in front of your desktop. If 'Always on Top' mode is disabled, only the currently activated window is placed in front of your desktop. |
| Relative Time Display: | Enables/Disables 'Relative Time Display' mode. This mode is only created for video files, which are from iCue™ Streaming Server. You find the time display in the control panel of XPlayer™. If 'Relative 00:00:27 Time Display' mode is enabled, it will assume that the video file begins at time 00:00:00. In this case the time display shows the actual time from played video file. If 'Relative Time Display' mode is disabled, the time display shows the time on which the video files was recorded. |
| Relative Time on Slider: | Enables/Disables 'Relative Time on Slider' mode. This mode is only created for video files, which are from iCue™ Streaming Server. If 'Relative Time on Slider' mode is enabled, the actual time on slider is always 00:00:00. The slider sections behind and before the slider, you have a negative and positive time. If 'Relative Time on Slider' mode is disabled, the comportment is depending on the setting of 'Relative Time Display' mode. If 'Relative Time on Slider' |

| | |
|-----------------------------|--|
| | mode and 'Relative Time Display' mode are disabled, the time on slider shows the time on which the video files was recorded. If 'Relative Time on Slider' mode is disabled and 'Relative Time Display' mode is enabled, it will assume that the video file begins at the time 00:00:00. In this case time on the slider shows the actual time from the played video file. |
| Open full screen mode: | Enables/Disables the 'Open full screen mode'. If this mode is enabled, the stream or video clip, which you have selected, opens automatically in full screen mode. |
| Open with vertical size: | Enables/Disables the 'Open with vertical size' mode. If this mode is enabled, the XPlayer™ opens with the vertical size which you have entered in the text box beside from the 'Open with vertical size' check-box. |
| Close player on stream end: | Enables/Disables the 'Close player on stream end' mode. If this mode is enabled, the XPlayer™ closes after a video file or VOD playback ends. |
| Enable Overlays: | Enables/Disables the 'Enable Overlays' mode. |
| Select PIDs | Enables/Disables the possibility to select specific audio and video PIDs from a multi program transport stream (MPTS). If this check-box is enabled and the XPlayer initialises a multi program transport stream, a dialog window appears in which the user can choose the specific audio and video PID. |
| Show URL List | Enable/Disable the URL List on the Left Side from the XPlayer™ ..! After changing this mode, you must restart the XPlayer™ |
| Fast Play Step: | Specifies the step size in frames for the 'Fast Forward' and 'Rewind' buttons on the control panel of the XPlayer™.  |
| Jump time: | Specifies the jump time in seconds for the 'Jump' buttons on the control panel of the XPlayer™.  |
| Slider Time Range: | Specifies the shown time range in seconds of the slider. |
| Delay Mode: | Specifies the value of the latency in milliseconds. With this you regulate a receiving buffer. The higher the Value the higher the delay between input and output. ..! It is recommended to use a minimum of 300 msec |
| Network adapters: | Specifies the network card, from which the XPlayer™ should receive the desired stream. If 'Auto detect' is selected and the PC has more than one IP-address/network adapter then the first free adapter will be chosen for the XPlayer's network access and stream receiving. ..! Normal users with only one network adapter, i.e. only one IP-address, should change the 'Network adapters' setting to the 'Auto detect'. ..! If you need to change your IP-address frequently (e.g. for demo purposes) then it is best to use 'Auto detect'. |
| Crop Level: | Specifies the crop level. This function crops the image borders of the video in different levels. <ul style="list-style-type: none"> ▪ Crop None ▪ Crop Small ▪ Crop Medium ▪ Crop Strong |
| MC-XRoute IP: | Specifies the IP-address of the system on which the MultiCoder™ Server is installed. This field is only needed when you use the MultiCoder™ with the MC-XROUTE module. To use the MultiCoder™ MC-XROUTE with the XPlayer™, please see the MultiCoder™ user guide. |
| MPEG2 Decoder: | The 'MPEG2 Decoder' area contains all parameters for MPEG-2 decoding. |

| | |
|------------------------|--|
| Hardware Acceleration: | Enables/Disables the hardware acceleration (if available). The hardware acceleration allows you to decode video data using the video adapter GPU that reduces the CPU usage. |
| Deinterlace: | Specifies the type of deinterlacing mode. |
| Deinterlace Condition: | Specifies the condition if the XPlayer must deinterlace output frames. |
| H264 Decoder: | The 'H264 Decoder' area contains all parameters for MPEG-4 decoding. |
| Hardware Acceleration: | Enables/Disables the hardware acceleration (if available). The hardware acceleration allows you to decode video data using the video adapter GPU that reduces the CPU usage. |
| Deinterlace: | Specifies the deinterlacing mode. |
| Low Latency: | The XPlayer provides minimal output delay if this mode is enabled. It gives one output frame as this is only possible according to the standard decoding process. Otherwise, it waits for filling the buffer and gives only one output frame after it receives one new frame. Smooth removing of frames from the buffer provides smoother playback at 'live' decoding and at decoding on low power machines. |
| Audio Talkback: | The 'Audio Talkback' area contains all necessary parameters for Audio Talkback described in Chapter 4.6 |
| Audio Device: | Specifies the Audio input Device |
| Audio Format: | Specifies the used Audio Format |
| Packetize | Specifies the Packetize |
| Video X: | Specifies the original horizontal video size of the input stream/file. This is a read-only option. |
| Video Y: | Specifies the original vertical video size of the input stream/file. This is a read-only option. |
| FPS: | Specifies the framrate in fps (frames per seconds) of the input stream/file. This is a read-only option. |
| Aspect Ratio: | Specifies the aspect ratio of the input stream/file. This is a read-only option. The value 1,33 indicates the aspect ratio 4:3. The value 1,78 indicates the aspect ratio 16:9. |
| Duration: | Specifies the duration of a video file. This option is only available for file playback. This is a read-only option. |
| Rate: | Shows the current 'Playback Speed' of the video. See also chapter 4.2 on page 15. This is a read-only option. |
| Version | Specifies the software version of the XPlayer™. |
| Defaults: | Sets the options menu of the XPlayer™ to the factory default settings. |
| OK: | Saves your settings and closes the 'Options' window. |
| Cancel: | Closes the 'Options' window without saving your settings. |
| Apply: | Saves your settings. |

Table 3: Description of the 'Player Options' window of the XPlayer™

4.6 Using Talkback with XPlayer™

The Talkback functionality can be used to send Audio back to the Original sender see Figure 22.

Requirements:

1. A Talkback Receiver who is able to receive Audio PCM stream like Teracue ENC-100, ENC-200 or ENC-300 with a connected Speaker or Headphone
2. The Client Computer with installed XPlayer™ needs a working microphone.

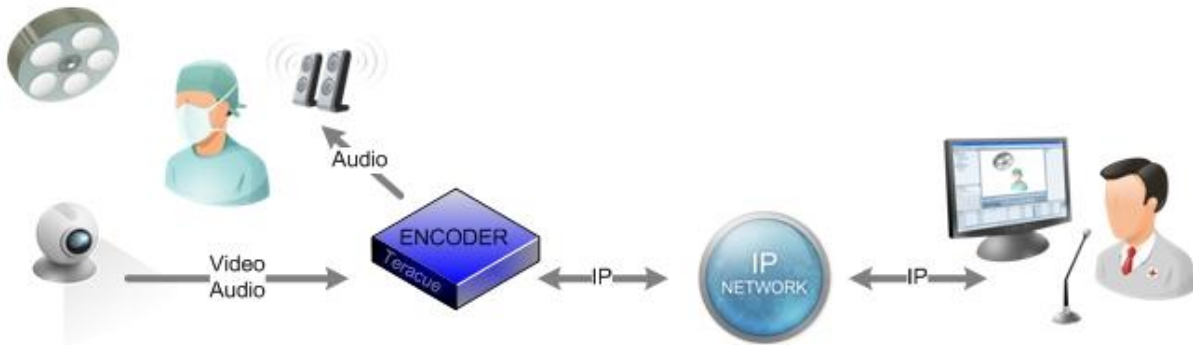


Figure 22: 'Talkback with the XPlayer™

Configuration Steps to send an Audio stream to the Original Sender:

1. Configure the Talkback settings in the Player Options' of the XPlayer™ like described in Chapter 4.5
2. Set the Audio Device you want to use. When using a Teracue Encoder ENC-100, ENC-200 or ENC-300 please select the Sampling Rate in Hz corresponding to the Encoder settings, mostly used is 48 kHz. The Teracue Encoder also use 1 Channel (Mono) 16 bit
3. Add a new Channel in the URL List like described in Chapter 4.3.4 and add the IP Address of the Encoder and the configured Talkback Port, default is 9177.
4. Start the stream with double click on the configured Channel in the URL List.
5. Start and Stop the Talkback by using the Microphone Icon.

5. Using XPlayer™ into Windows Media Player to display Live-Streams

To display Teracue Live-Streams with the Windows Media Player, you must install the XPlayer™ into the Windows Media Player. The display of Teracue Live-Streams is only supported for the Windows Media Player Versions 6, 10 and 11. For the implementation you need to install XPlayer™ and the following three files:

- The 'register_filters.bat' file and
- The 'Register_iCue-Protocol.reg' file
- The 'unregister_filters.bat' file (Is only needed when the filters should be unregistered)

The Files are located on the Teracue DVD: 4.Software\2.Decoding-STB-Player\XPlayer_PC-Stream-Player\Using_XPlayer_into_Windows-Media-Player or you could download on the Teracue website.

Before you can start with the implementation, please be sure that the XPlayer™ is installed on your system. If the XPlayer™ is not installed on your system, please install the XPlayer™ first.

Next please copy the 'register_filters.bat' file and paste the file into the folder, in which the XPlayer™ filters are stored. The default path for this folder is C:\Program Files\Teracue\XPlayer\Filters. Afterwards please execute the 'register_filters.bat' file. This 'register_filters.bat' file will register several XPlayer™ filters.

..!. Under Windows 7 and Windows 8 64 bit and 32 bit please open a command line with administrator rights.

Change the directory with 'cd c:\program files (86)\teracue\x-player\filter'

And execute then 'register_filters.bat'

After all XPlayer™ filters are registered, you must register the iCue™ protocol in the registry. Therefore please execute the 'Register_iCue-Protocol.reg' file. If you have executed the 'Register_iCue-Protocol.reg' file, you will be asked whether you want to add the information in this file to the registry. See Figure 23. Please confirm this question by clicking the 'Yes' button.

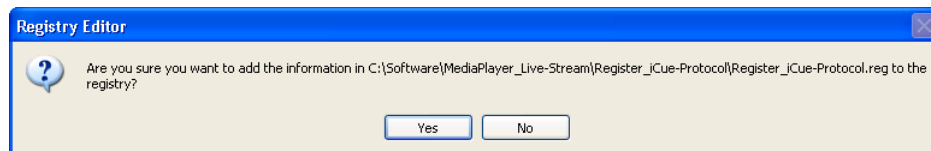


Figure 23: Add the information of the 'Register_iCue-Protocol.reg' file into the registry

If you have confirmed the question whether you want to add the information of the 'Register_iCue-Protocol.reg' file into the registry, a hint window opens which informs you that the information is successfully added into the registry. See Figure 24. Click the 'OK' button to close this hint window.

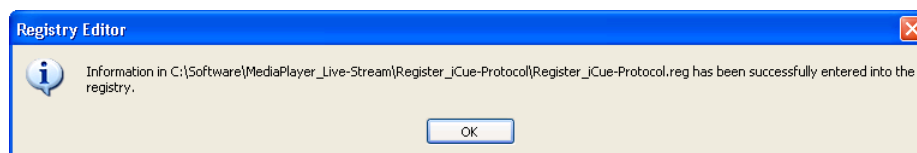


Figure 24: Hint window which describes that the information has been successfully added into the registry

Now, you can watch Teracue Live-Streams with the Windows Media Player. To display Teracue Live-Stream on the Windows Media Player, please start the Windows Media Player, go in the menu bar to 'File' and select 'Open URL'. It opens the 'Open URL' window, see Figure 25.

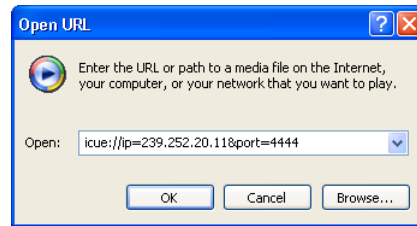


Figure 25: 'Open URL' window

Please enter in the 'Open' text field the following string:

icue://ip=IP-address&port=Port-Number

Instead of the **yellow marked part** please type the IP-address and the port number of your desired stream. For example: icue://ip=239.252.20.100&port=4444. After your entry, please click the 'OK' button to confirm your entry. Now, the Windows Media Player should display your desired Teracue Live-Stream.

If you want to unregister the XPlayer filters, please copy the 'unregister_filters.bat' file and paste the file into the folder, in which the XPlayer™ filters are stored. The default path for this folder is C:\Program Files\Teracue\XPlayer\Filters. Afterwards please execute the 'unregister_filters.bat' file. This 'unregister_filters.bat' file will unregister the XPlayer™ filters.

Know issues with Windows Media Player (WMP):

1. Audio is not working
Windows Media Player decide himself which Filter is used for Video and Audio.
With the Microsoft Program Graphedt.exe from our DVD you could discover which Filter the Media Player is using.
Search the Filter in the Registry and delete him.
After this register the Teracue Filter again.
!. Changes made to the Windows registry happen immediately, and no backup is automatically made. Do not edit the Windows registry unless you are confident about doing so.
Teracue assumes no responsibility resulting from faulty work in the registry. Create a backup before you do any action.

Microsoft have issued the following warning with respect to the Registry Editor:
"Using Registry Editor incorrectly can cause serious, system-wide problems that may require you to re-install Windows to correct them. Microsoft cannot guarantee that any problems resulting from the use of Registry Editor can be solved. Use this tool at your own risk."
2. Video is visible but in bad quality
In dependence of the graphics card it could be that the quality is not good.
Please search following Key in the registry:
'HKEY_CURRENT_USER\Software\MainConcept\MainConcept AVC/H.264 Video Decoder\wmplayer.exe\Hardware acceleration'
Change the setting from '1' to '0' and start the media player new.
3. The Windows Media Player 64 Bit is not able to display the Video
The Teracue filters are 32 Bit files and only the WMP 32 Bit is able to use them.
Please start only the WMP 32 Bit from the folder:
'c:\program files (86)\Microsoft\Windows Media Player\wmplayer.exe'

6. Forwarding a Stream of the XPlayer to the Video Capture Card

..! This Feature is unsupported.

In this chapter it will be described the configuration for the forwarding of streams to the video capture card 'Decklink' from Blackmagic (see www.blackmagic-design.com). In this case the XPlayer™ receives the stream and transmits the decoded video signal to the output of the video capture card, see Figure 26. Only the video capture cards of the product family 'Decklink' of the company 'Blackmagic' are supported. Following requirements must be complied for the forwarding of streams:

- The used video capture card belongs to the 'Decklink' product family.
- The video capture card is already mounted in the computer.
- All necessary driver of the video capture card are already installed.
- The XPlayer™ Software (min. Version 4.0.0.23) is already installed and registered on the same computer, in which the video capture card is mounted.

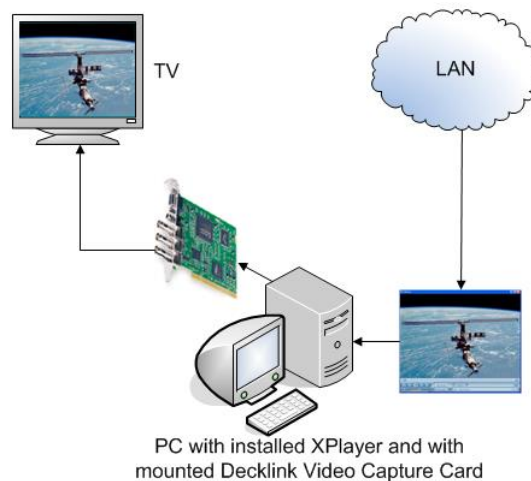


Figure 26: Forwarding a stream of the XPlayer™ to video capture card

The configuration of the forwarding occurs in the registry. To open the registry, please go to the windows start menu and choose 'Run'. It opens the 'Run' window. Please enter in the dialog field of the 'Run' window 'regedit' and confirm your entry with 'OK'.

It opens the registry window. Please follow the following path in the data tree of this window: **HKEY_LOCAL_MACHINE>SOFTWARE>Teracue>iCue>iCueXPlayer**. If you have opened the 'DecklinkOpMode'. See Figure 27.

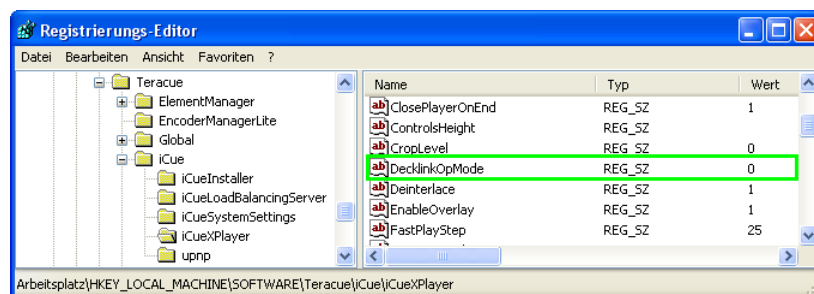


Figure 27: Registry window with the 'DecklinkOpMode' entry

The 'DecklinkOpMode' entry can have following values:

| ,DecklinkOpMode' Value: | Description: |
|-------------------------|--|
| 0: | The forwarding is off. It is no signal on the output of the video capture card. |
| 1: | The forwarding is on. There is a decoded video signal on the output of the video capture card. The XPlayer™ displays also the decoded video stream. |
| 2: | The forwarding is on. There is a decoded video signal on the output of the video capture card. But the XPlayer™ does not display the decoded video stream. ..! We recommend using the value '2' for the forwarding a stream. |

Table 4: Possible values of the registry entry 'DecklinkOpMode'

To enable the forwarding a stream, you must change the 'DecklinkOpMode' value. Please double click on the registry entry 'DecklinkOpMode'. It opens the edit window of the 'DecklinkOpMode' entry, see Figure 28. Enter in the text field '**Value**' your desired value and click afterwards '**OK**'. The description of the individual values is described in Table 4.

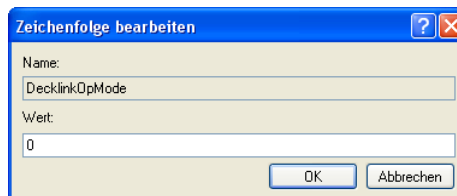


Figure 28: Edit window of the registry entry 'DecklinkOpMode'

Now you can leave the registry. Depending on which value was entered, the forwarding is enable or disabled.

7. Display video clips / streams in the XPlayer™ via command line

You can also display a video clip or a multicast stream in the XPlayer™ by using a command line. Therefor you must open the command prompt and enter command of either of the following subchapter.

7.1 Display a Multicast Stream via Command Line:

C:\Program Files\Teracue\Xplayer\XPlayer.exe icue://239.252.20.100:4444;Test Multicast

Table 5 shows the description of the command to display a multicast stream on the XPlayer™ via command line.

| Command Part: | Description: |
|---------------------|---|
| Yellow Part: | Specifies the XPlayer™ directory in which the XPlayer.exe is stored. Furthermore, the XPlayer™ will be started. |
| Green Part: | Specifies the multicast IP-address and the port number of the stream which you want to display. |
| Blue Part: | Specifies the stream name. |

Table 5: Description of the command to display a multicast stream on the XPlayer™

7.2 Display a Video Clip via Command Line

C:\Program Files\Teracue\Xplayer\XPlayer.exe icue://172.16.1.72/51;Test Clip

Table 6 shows the description of the command to display a video clip on the XPlayer™ via command line.

| Command Part: | Description: |
|---------------------|---|
| Yellow Part: | Specifies the XPlayer™ directory in which the XPlayer.exe is stored. Furthermore, the XPlayer™ will be started. |
| Red Part: | Specifies the IP-address of the iCue™ Server on which your desired video clip is stored. |
| Grey Part: | Specifies the clip ID (Identifier) of your desired video clip which you want to display. |
| Blue Part: | Specifies the video clip name. |

Table 6: Description of the command to display a video clip on the XPlayer™

8. Start a Multicast Stream in the XPlayer™ via webpage link

You can also launch the XPlayer™ which displays a specific multicast stream by clicking on a link on a webpage. The specific multicast stream, which shall be displayed by the XPlayer™, must be defined in the HTML source code of the webpage.

Following a sample webpage is shown, whose included link launches the XPlayer™ and plays the defined multicast stream.

Sample HTML source code:

```
<html>
  <body>
    <br>
    <a href="#?icue://239.252.20.100:4444;Test Stream">PLAY STREAM Link</a>
    <br>
  </body>
</html>
```

Table 7 shows in the HTML source code the definition of the multicast stream which should be displayed by the XPlayer™.

| Multicast Stream Definition: | Description: |
|------------------------------|---|
| Yellow Part: | Specifies the multicast IP-address of the multicast stream which should be displayed on the XPlayer™. |
| Green Part: | Specifies the port number of the multicast stream which should be displayed on the XPlayer™. |

Table 7: Multicast stream definition in the HTML source code

9. Removing the XPlayer™ from your system

To uninstall the XPlayer™ choose the control panel **'Software'**. To open the control panel, please go to the Window Start menu and select 'Control Panel'. The 'Software' window opens, see Figure 29. Next, please locate the XPlayer™ which is listed under **'Teracue XPlayer'** and press the **'Remove'** button.

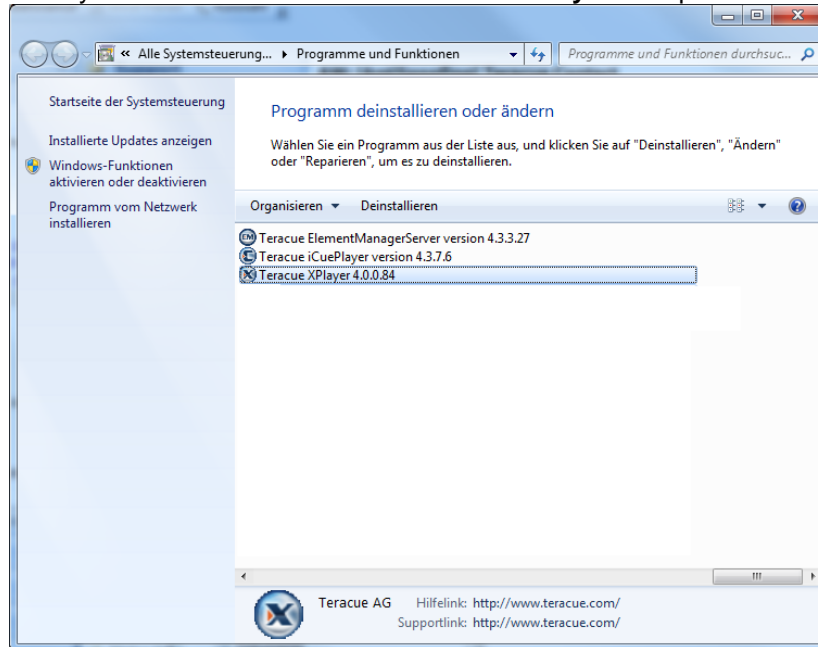


Figure 29: 'Software' window

Afterwards you will be asked, if you want to remove the XPlayer™ completely from your system. Please confirm this with **'OK'**, see Figure 30.

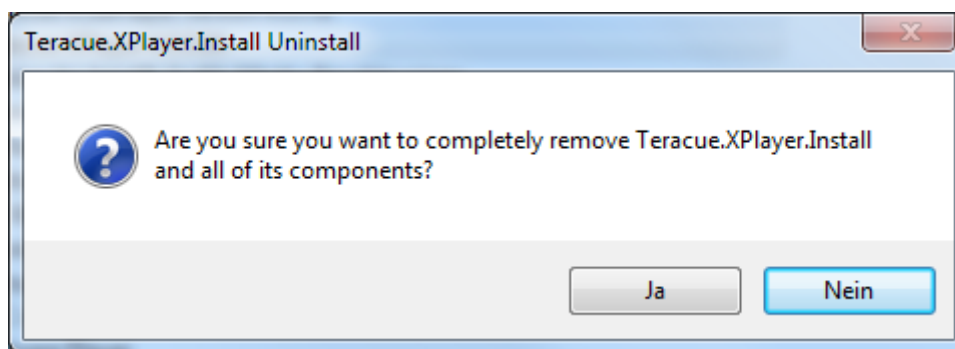


Figure 30: 'Confirm Uninstall' window

The XPlayer™ will now uninstall and the uninstallation should take less than one minute, see Figure 31.

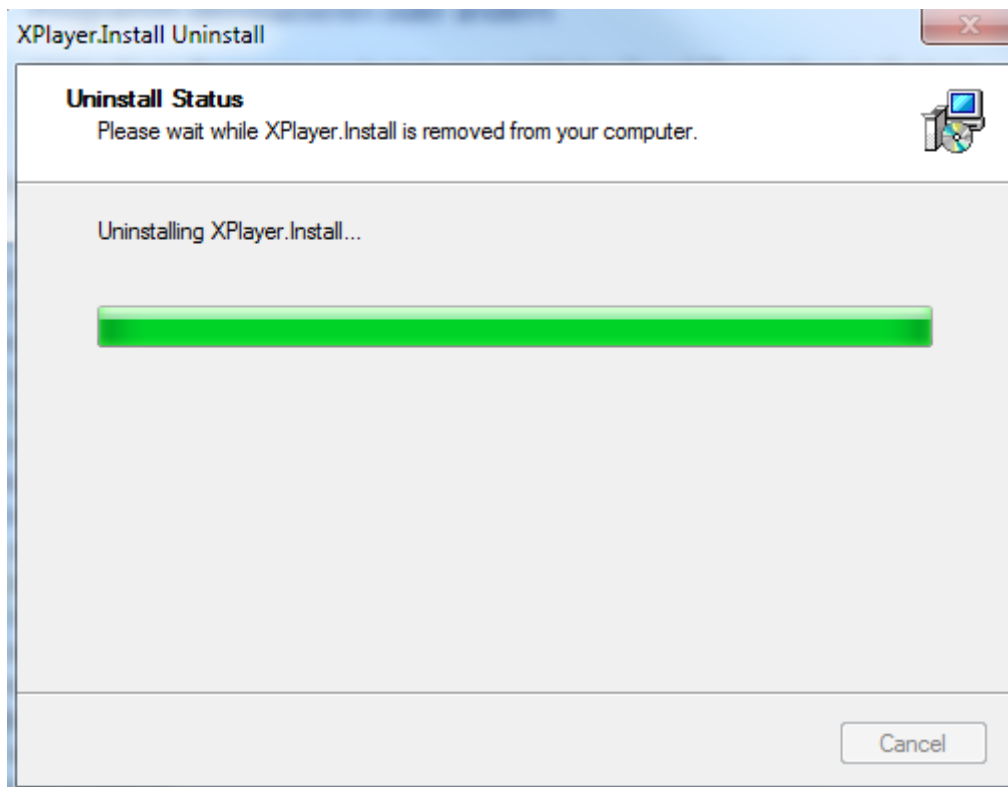


Figure 31: Uninstallation process of the XPlayer™

When the XPlayer™ has finished the uninstallation, please click on **'Finish'** to complete the uninstallation process, see Figure 32.

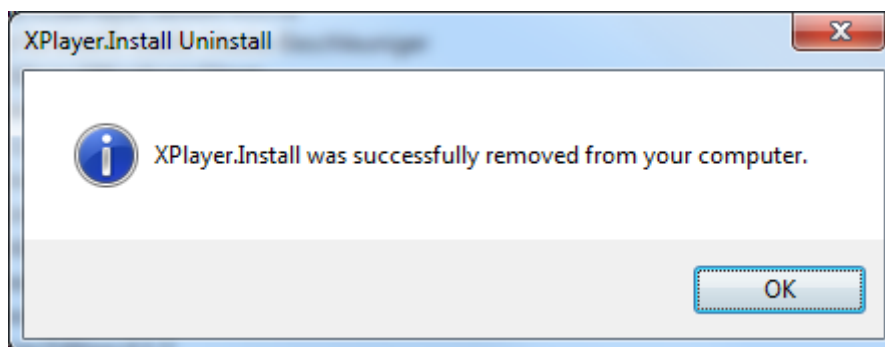


Figure 32: 'Uninstall Complete' window

10. Update XPlayer™

To update a installed XPlayer™ please uninstall XPlayer™ described in Chapter 9. Install the new XPlayer™ described in Chapter 3.

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